

REMARKS

I. INTRODUCTION:

The Applicants thank the Examiner for the careful consideration of this application. Claims 1, 2, 4-9, 11, 14 and 15 are currently amended. Specifically, claim 1 is amended to reflect that “the sidewalls comprise upper corner regions, lower corner regions and sidewall elements connecting the upper and lower corner regions.” This amendment derives support from Paragraphs 00013, 00014 and 00024 of the Specification, as originally filed. Based on the foregoing amendments and the following remarks, the Applicants respectfully request reconsideration and withdrawal of the present rejection.

II. REJECTIONS UNDER 35 U.S.C. §103(A):

(I) On page 2, the Office Action rejects claims 1, 2, 4, 5, 7-10 and 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,193,734 to Williams in view of U.S. Patent No. 4,016,688 to Tiffin et al.

Claim 1 is currently amended to recite a “welded profile for fitting a digger with a backhoe bucket or a loading shovel, said welded profile comprising: an upper flange and a lower flange; and sidewalls operatively connected to the upper flange and lower flange, wherein the sidewalls comprise upper corner regions, lower corner regions and sidewall elements connecting the upper and lower corner regions, wherein each of the upper and lower corner regions comprise a reinforced profile, formed with a separate sheet-metal sheet, between the upper flange and the sidewall elements and between the lower flange and the sidewall elements, respectively, wherein the upper

and lower corner regions are welded to the respective sidewall elements, wherein the sidewall elements have a thinner cross section than the upper and lower corner regions, and wherein the upper and lower corner regions include positioning locations for cylinder attachment points.”

Williams, meanwhile, purportedly discloses “an elongated box-like structure made up of a pair of channels 50 each of which has a generally triangular web or sidewall 52, a bottom flange 54 extending substantially the full length of the channel and a top flange 56 which extends for approximately one half the length of the channel at the outer end of the boom 14. The channels 50 have their abutting edges of the bottom and top flanges 54 and 56 welded together to form a generally box-like structure as best seen in FIG 3.” *Col. 2: Line 67 to Col. 3: Line 8*. The Office Action aligns the “top flange 56” and the “bottom flange 54” of Williams with the upper flange and lower flange of claim 1, respectively. The Office Action further purportedly aligns the “side walls 52” of Williams with the sidewall elements of claim 1 and the “tubular boss 74” of Williams with the upper and lower corner regions of claim 1.

However, Williams does not disclose “sidewalls [that] comprise upper corner regions, lower corner regions and sidewall elements connecting the upper and lower corner regions, wherein each of the upper and lower corner regions comprise a reinforced profile, formed with a separate sheet-metal sheet, between the upper flange and the sidewall elements and between the lower flange and the sidewall elements, wherein the upper and lower corner regions are welded to the respective sidewall elements,” as claimed.

Rather, Williams discloses that “channels 50 have their abutting edges of the bottom and top flanges 54 and 56 welded together to form a generally box-like structure as best seen in FIG 3.” *Col. 3: Lines 5-8*. Simply put, sidewalls 52 and the top and bottom flanges 56, 54 of Williams are

welded together to form a box-like structure. The four corners of the box-like structure in Williams, however, do not each have a **reinforced profile**. Nor are the four corners of the box-like structure in Williams “**welded to the respective sidewall elements**, wherein the sidewall elements have a **thinner cross section** than the upper and lower corner regions,” as claimed. In addition, the four corners of the box-like structure in Williams do not include “**positioning locations for cylinder attachment points**.” For these reasons, the four corners of the box-like structure in Williams clearly do not represent the upper corner regions and lower corner regions, as recited in claim 1.

More specifically, and contrary to what is contended in the Examiner’s Action, the tubular bosses 74 of Williams do not constitute the upper and lower corner regions as recited in claim 1. As seen in Figure 3, the tubular bosses 74 of Williams are positioned **above both** the top flange 56 and the side walls 52 and, thus, do not form upper corner regions, as claimed. Further to this point, the tubular bosses 74 are positioned **well above** the bottom flange 54 of Williams and, thus, do not form lower corner regions, as claimed, either.

Further, the “reinforcing plates 78” of Williams do not constitute the upper and lower corner regions as recited in claim 1. *First*, the reinforcing plates 78 of Williams are not corner regions positioned “between the upper flange and the sidewall elements and between the lower flange and the sidewall elements, respectively,” as recited in claim 1. Rather in Williams, “[t]he pin 30 supporting the cylinder of the hydraulic actuator 26 and pin 42 supporting the cylinder 40 of the hydraulic actuator 38 are supported respectively by axially aligned pairs of tubular bosses 74 and 76 carried by reinforcing plates 78 which are welded to side walls 52.” *Col. 3: Lines 28-34*. Thus, the reinforcing plates 78 of Williams are merely “welded to side walls 52” and are not positioned **between** the top flange 56 and the side wall 52 and **between** the bottom flange 54 and the side wall

52, respectively. *See FIG. 3*. Further, the reinforcing plates 78, as shown in FIG. 3, are positioned flat against the edge of the sidewalls 52 and are not structured to represent a ***corner region***. In fact, the reinforcing plates 78 do not even extend all the way down the side walls 52 towards the bottom flange 54 of Williams. Thus, the reinforcing plates 78 clearly do not form “lower corner regions” positioned “between the lower flange and the sidewalls,” as recited in claim 1.

Even if the reinforcing plates 78 of Williams did constitute upper and lower corner regions as recited in claim 1, neither the text nor the drawings in Williams disclose that “***the sidewall elements have a thinner cross section than the upper and lower corner regions***” or that “the upper and lower corner regions include ***positioning locations for cylinder attachment points***,” as recited in claim 1.

On page 3, the Office Action further asserts that the “angle chords 28-31” of Tiffin, when viewed in combination with Williams, disclose each of the upper and lower corner regions having a reinforced profile, as recited in claim 1. Unlike the claimed invention, which discloses a welded profile used for attaching a loading shovel or a backhoe bucket in such a way that it results in a reduction of stresses in highly stressed local regions (*See Specification, Paragraph 0008*), Tiffin discloses a:

crane [that] has an extensible boom assembly 14 that includes telescopically interfitting boom sections 16, 18 and 20.... The boom section 16 fits about the other boom sections, and this section forms a base for the boom assembly. Slidably fitted within the base boom section is the intermediate boom section 18 and the tip boom section 20 is slidably fitted within the intermediate boom section. One end of the base boom section is pivotably connected within a mounting frame 22 that rests upon an upper machinery platform 24. An extensible strut 26, for elevating the boom assembly, has one end pivotably connected to the base boom section, at a point spaced from the mounting frame, and the other end of the strut is pivotably connected to the upper machinery platform.

Col. 2, Line 67 to Col 3, Line 17. Thus, whereas the welded profile of the claimed invention is used for fitting a digger with a backhoe bucket or a loading shovel, the base boom section 16 of Tiffin “has a generally rectangular cross section that surrounds the intermediate boom section 18, which in turn encloses the top boom section 20” for telescoping (i.e. extending and retracting) the crane boom.

Therefore, it is respectfully submitted that the telescoping base boom section 16 of Tiffin, including “angle chords 28-31” as upper and lower corner regions, is not applicable to the welded profile as claimed, because the telescoping base boom section 16 of Tiffin is not used for fitting a digger (or crane) with a backhoe bucket, a loading shovel, or any other mechanical tool. It is further respectfully submitted, that such a combination of teachings from Tiffin as proposed in the Examiner’s Action constitutes a picking and choosing of disparate elements from separate references and combining them in the manner which could only be based on Applicants’ own disclosure. See *In re Arkley*, 455 F.2d 586 (C.C.P.A. 1972) (“the reference ... must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.”). One skilled in the art would not look to Tiffin, which solves the problem of buckling in a telescoping boom profile of a crane, to modify the lifting machine boom profile of Williams . There is no other reason of record to support Examiner’s use of Tiffin.

Even if one were to use Tiffin to modify Williams in the manner suggested in the Examiner’s Action, the combination would not yield “upper and lower corner regions [that] include *positioning locations for cylinder attachment points*,” as recited in claim 1. The combination

would modify the four corners of the box-like structure in Williams (i.e. the sidewalls 52 and the top and bottom flanges 56, 54 of Williams that are welded together to form a box-like structure) to include angle chords 28-31, as disclosed in Tiffin. However, neither the four corners of Williams nor the angle chords 28-31 of Tiffin include positioning locations for cylinder attachment points. As described above, the angle chords 28-31 of Tiffin are only used to resist buckling “at the contact points between boom sections... as the sections are extended and retracted,” the angle chords 28-31 are not used for fitting or attaching additional machinery through the use of cylinder attachment points. *See Col. 1, Lines 19-25.* By contrast, claim 1 recites that the upper and lower corner regions “comprise a reinforced profile” and “include positioning locations for cylinder attachment points” for fitting a digger with a backhoe bucket or a loading shovel.

For these reasons, Williams in view of Tiffin does not disclose “sidewalls, of a welded profile for fitting a digger with a backhoe bucket or a loading shovel, that “comprise upper corner regions, lower corner regions and sidewall elements connecting the upper and lower corner regions, wherein each of the upper and lower corner regions comprise a reinforced profile, formed with a separate sheet-metal sheet, between the upper flange and the sidewall elements and between the lower flange and the sidewall elements, respectively, wherein the upper and lower corner regions are welded to the respective sidewall elements, wherein the sidewall elements have a thinner cross section than the upper and lower corner regions, and wherein the upper and lower corner regions include positioning locations for cylinder attachment points,” as recited in claim 1. Claims 2, 4, 5, 7-10 and 15 depend from independent claim 1 and are patentable for at least the same foregoing reasons. The Applicants respectfully request reconsideration and withdrawal of the present rejection.

(2) On page 3, the Office Action rejects claim 6 under 35 U.S.C. §103(a) as being unpatentable over Williams in view of Tiffin, and further in view of U.S. Patent No. 4,337,601. Claim 6 depends from independent claim 1 and is patentable for at least the same foregoing reasons. Vaerk does not remedy the deficiencies of Williams and Tiffin as discussed above. The Applicants respectfully request reconsideration and withdrawal of the present rejection.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. The Applicants, therefore, respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. The Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided. Prompt and favorable consideration of this Amendment is respectfully requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0261, under Order No. 32016-218521.

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